

AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

1. (Currently Amended) A biosensor operating on an electrochemical detection principle, comprising:

a transducer array, containing a flexible metal/isolator composite composed of a metal layer and an isolator layer with a permanent connection between a surface of the metal layer and a surface of the isolator layer,

the metal layer being ~~in the form of~~ a metal substrate and ~~being structured in~~ such a ~~manner~~ that metal areas ~~which~~ are electrically isolated from one another ~~are produced~~,

the isolator layer, ~~located on~~ directly contacting a first surface of the metal substrate, the isolator layer having open spaces formed therein such that the first surface of the metal substrate ~~remain~~ has exposed areas as sensor surfaces in the isolator ~~surface~~ layer, wherein[[,]]

the metal substrate includes exposed areas ~~that are contactable with~~, on a second surface facing away from or opposite the first surface, that are contactable with discrete electrodes, the ~~metal~~ exposed areas each including associated individual measurement electrodes and at least one reference electrode.

2. (Currently Amended) The electrochemical biosensor as claimed in claim 1, wherein spaces in the isolator layer ~~forms~~ form cavities in which ~~ever~~ the sensor surfaces are located.

3. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein electrical contacts are provided, with the contacts and the sensor surfaces being located on opposite sides of the metal/isolator composite.

4. (Previously Presented) The electrochemical biosensor as claimed in claim 3, wherein the contacts are fitted to the metal areas, which are exposed on both sides, directly opposite the sensor surfaces.

5. (Previously Presented) The electrochemical biosensor as claimed in claim 3, wherein the contacts are fitted to the metal areas, which are exposed on one side, such that the contacts are laterally offset with respect to the sensor surfaces.

6. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein a single sensor surface contains at least two electrically isolated metal areas.

7. (Previously Presented) The electrochemical biosensor as claimed in claim 6, wherein gaps which form additional isolator areas are formed between the two metal areas on the contact side.

8. (Previously Presented) The electrochemical biosensor as claimed in claim 7, wherein the additional isolator areas leave metal areas free for electrical contact to be made.

9. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein the sensor surfaces are composed of at least one of a noble metal and a noble metal alloy.

10. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein the sensor surfaces are coated with at least one of a noble metal and a noble metal alloy.

11. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein electrodes are provided on a graphite base.

12. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein at least one of the sensor surfaces is coated with silver/silver chloride.

13. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein an electrolyte is provided and wets a plurality of sensor surfaces.

14. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein at least two sensor surfaces have voltage applicable to them.

15. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein at least two sensor surfaces, and one sensor surface coated with silver chloride, are connectable as a three-electrode arrangement to a potentiostat, with the sensor surface coated with silver chloride being the reference electrode.

16. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein a separate reference electrode is provided, and is immersed in an electrolyte.
17. (Previously Presented) The electrochemical biosensor as claimed in claim 16, wherein at least two sensor surfaces and the separate reference electrode are connectable to a potentiostat.
18. (Previously Presented) The electrochemical biosensor as claimed in claim 16, wherein the electrically isolated metal areas with sensor surfaces have voltage applicable to them.
19. (Previously Presented) The electrochemical biosensor as claimed in claim 16, wherein the electrically isolated metal areas of one sensor surface and the reference electrode are connectable as a three-electrode arrangement to a potentiostat.
20. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein the cavities contain biochemical identification layers.
21. (Currently Amended) The electrochemical biosensor as claimed in claim 1, wherein the open spaces on the first surface of the metal substrate form electrolyte areas in individual cavities that are isolated from one another.
22. (Currently Amended) The electrochemical biosensor as claimed in claim 21, wherein a separate metal surface on the isolator layer closes the cavities.

23. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein the sensor surfaces have a voltage applicable to them with respect to the additional metal surface.

24. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein one additional sensor surface is provided per cavity and is used as a reference electrode.

25. (Previously Presented) The electrochemical biosensor as claimed in claim 22, wherein the metal surface which closes the cavities is coated with silver chloride and is used as a reference electrode.

26. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein the sensor surfaces have catalytic activity.

27. (Cancelled)

28. (Cancelled)

29. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein electrodes are provided on a graphite base, in the form of a carbon paste electrode.

30. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein the first surface of the metal substrate in the open spaces of the isolator layer is exposed.

31. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein the metal substrate is exposed on each of the first surface and the second surface at the sensor surface and the contactable areas.

32. (Previously Presented) The electrochemical biosensor as claimed in claim 1, wherein the metal areas are substantially of the same size and shape.

<End of Claims Listing>